INTRODUCTION

The attached documents consist of parts of four separate research projects prepared since 1945 by members of the Geological Institute of the Freiberg (Saxony) Mining Academy.

1. Project D/14 is a study of the geological and structural factors which govern the distribution of ore deposits. The project was divided into 15 sub-sections, to cover all of Western Europe. Not all of these sections were completed, however, because of the "death or departure" of some of the specialists working on them. The attached material includes eight of these reports, plus a short introductory section which explains the scope of the project as a whole. The sections on hand are as follows:

Section II - The Sudeten - Silesian Area

Section III - The Harz Mountains and the Surrounding Area

Section IV - The Balkan Peninsula and the Dinaric Mountains

Section VI - The Thuringian Forest, the Richelsdorf Mountains and Adjacent Areas

Section VII - The Northern and Northwestern Edge of the Bohemian Mass

Section VIII - The Rhine Valley Trough with its Surrounding Mountains and Adjacent Step Terrain

Section X - The Carpathians and the Inner Carpathian Depression

Section XI - The Core of the Bohemian Mass; Northwestern Germany; Conclusions Concerning Ore Deposits in Northwestern, Central and Southeastern Europe.

It appears that Section XI is an attempt to gather together as many as possible of the loose ends remaining when it became apparent to the research workers that Sections XI through XV would never be completed as originally planned. These sections were to have covered the following areas:

Section XI - The Core of the Bohemian Mass

Section XII - The Rhine Mass and the Northwestern Depression

Section XIII - The Appenine Peninsula

Section XIV - France

Section XV - The Iberian Peninsula.

The sections which were evidently completed but which were not included in the present material were:

Section I - The Alps and Adjacent Depression Areas

Section V - Ireland

Section IX - Great Britain.

Each of the sections included, in addition to the general text, a table of contents, a list of illustrations and appendices, an introduction or summary, and a bibliography. The tables of contents and the lists of illustrations and appendices have been translated in full, and nearly complete translations were made of the introductions or summaries. The bibliographies were not translated. Each section has been placed in a separate envelope and given a letter designation corresponding to those on the English text which follows.

Notes were inserted in the English translations when items included in the tables of contents or lists were found to be missing from the original document. There are, however, a few illustrations included in the envelope with the introductory section which could not be properly placed in the various sections. It is possible that these correspond to some of the missing items.

It should also be mentioned that if further exploitation of the material is to be undertaken, a check of pages should be made, since nearly every section lacks one of more pages of text.

2. Study Topic 2/2 (3111) is a monograph on the deposits of non-ferrous metals and rare metals within the Versailles Treaty boundaries of Germany. This project also consists of 15 volumes, all of which presumably have been

completed. Only the first volume was included in the attached material, but with it there is a summary and a table of contents for the entire project, both of which were translated in addition to the table of contents and list of illustrations for Volume I.

3. Study Topic 1/1 (3112) is an evaluation of the deposits of non-ferrous metals and rare metals in the Soviet Zone of Germany, with estimates of reserves. This project is to some extent a companion piece to Study Topic 2/2 (3111), with the emphasis on the economic and engineering aspects rather than on the geological and mineralogical considerations. The project comprises seven volumes, all of which were completed, but again only the first volume was included in the present material. This volume contained a summary of the entire project but not a table of contents. This summary was translated more or less completely, and a complete translation was made of the table of contents and list of illustrations for Volume I.

4. The fourth project, which is unnumbered, is a detailed description of the Pechtelsgruen tungsten mine in Saxony, dated April 1949. A summary translation was made of this report.

SECTION II. THE SUDETEN-SILESIA ORE REGION

Introduction

This volume treats Silesia and the Sudeten Mountains, including their southwestern regions which reach into Czechoslovakia. The most important points are the Sudeten Mountains with their magmatogenous ore deposits, the Permian troughs of Lower Silesia and northeastern Bohemia with sedimentary copper deposits, and the Upper Silesian Triassic region with lead and zinc deposits. The deposits in the Sudeten Mountains are discussed in the order of age of the metallogenetic cycles (pre-Caledonian, Caledonian, and Varistian deposits). The general regularities in the distribution of the deposits are always discussed following the regional description of the groups of deposits.

The arrangement of the magmatogenous deposits of the Varistian intrusives in the Sudeten Mountains is particularly revealing. They extend in definite zones around the granite of the Riesengebirge, the inner zone being made up of arsenopyrite and magnetic pyrite deposits, the second zone of copper ore veins, and the outer zone of siderite and hematite veins. This zonal arrangement is repeated three times: in the southeastern part of the Riesengebirge, in the eruptive stock of Altenberg in the northeastern foothills, and in a center near Hussdorf and Wuenschenberg in the northern foothills of the Riesengebirge. In a vertical direction, this zonal arrangement can be seen by the primary level differences, which are especially prominent at Altenberg. Of particular interest is the fact that the grouping of the deposits fits in with the idea of two uprising fissures in the granite of the Riesengebirge, from which the plutonic rock has spread laterally. The thermally highest deposits are closest to these zones of origin.

The copper content of the Permian troughs in the border region of the Sudeten Mountains can generally be attributed to the erosion and transference of the primary components of deposits of Sudeten magma, according to sediment-petrographic investigations. However, the origin of the Upper Silesian Triassic region is problematical.

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4: Schematic profile of the Riesengebirge Varistian metal zones

5: N-S and E-W profiles of the plutonic rocks of the Riesengebirge

6: Occurrence and origin of sedimentary copper ores in the Permian trough of Central and Lower Silesia and Northeastern Bohemia

7: The Upper Silesian lead-zinc ore region

Tables (Appendix):

I: General map of the ore deposits of the Western Sudeten Mountains

II: The pre-Tertiary base in the southeastern part of the Upper Silesian Triassic region with the main ore concentrations in the tributary bays. (Note: Missing in original)